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**REMARKS**

Claims 14, 31-47, 55-56, and 59-60 are canceled, and as a result, claims 1, 3-13, 15-17, 23-30, 48-54, and 57-58 are now pending in the above-referenced patent application.

**§102 Rejection of the Claims**

Claims 1, 3-8, 11, 15-17, 23-30, 48-54, and 57-58 were rejected under 35 U.S.C. § 102(e) as being anticipated by Huang *et al.* (U.S. Patent No. 6,069,066). Applicant does not admit that Huang *et al.* is prior art and reserves the right, as provided for under 37 C.F.R. 1.131, to "swear behind" Huang *et al.* Applicant respectfully traverses the rejection of claims 1, 3-8, 11, 15-17, 23-30, 48-54, and 57-58.

Claims 1, 7, 8, 11, 15, 23, 26, 31, 48, 52, 54, 57, and 58, in referring to a trench, recites, "the depth being greater than a critical depth" In contrast, Huang *et al.*, in the abstract, teach, "An inter-metal dielectric layer with a trench is formed on the multi-metal layer." Hence, Huang *et al.* fail to teach a trench having "a critical depth" as recited in claims 1, 7, 8, 11, 15, 23, 26, 31, 48, 52, 54, 57, and 58. In addition, applicant's representative has reviewed Huang *et al.* and fails to find the word "critical" in Huang *et al.* The Office action, in paragraph 1, states, "Huang (Fig 2A-F) discloses . . . a trench having a depth and a width, the depth being greater than a critical depth (via sum of bottom layers)." The Office action does not cite to a column or line in Huang *et al.* that teaches "a trench having a depth and a width, the depth being greater than a critical depth (via sum of bottom layers)." Hence, Huang *et al.* fail to teach each of the elements of claims 1, 7, 8, 11, 15, 23, 26, 31, 48, 52, 54, 57, and 58. Thus, the Office action fails to state a *prima facie* case of anticipation with respect to claims 1, 7, 8, 11, 15, 23, 26, 31, 48, 52, 54, 57, and 58. Therefore, applicant requests withdrawal of the rejection and reconsideration and allowance of claims 1, 7, 8, 11, 15, 23, 26, 31, 48, 52, 54, 57, and 58.

Claim 3 is dependent on claim 1. Claims 5 and 6 are dependent on claim 4. Claims 16 and 17 are dependent on claim 15. Claims 24 and 25 are dependent on claim

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23. Claims 27, 28, 29, and 30 are dependent on claim 26. Claims 49, 50, and 51 are dependent on claim 48. Claim 53 is dependent on claim 52. For reasons analogous to those stated above and elements in the claims, applicant respectfully submits that the Office action fails to state a *prima facie* case of anticipation with respect to claims 3, 5, 6, 16, 17, 24, 25, 27, 28, 29, 30, 49, 50, 51, and 53.

### **§103 Rejection of the Claims**

#### **Claims 31-47**

Claims 31-47 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Sun *et al.* (U.S. Patent No. 6,245,380) in combination with Hsu (U.S. Patent No. 6,174,804). Claims 31-47 are canceled, so the rejections are moot.

#### **Claims 14, 55, 56, 59, and 60**

Claims 14, 55, 56, 59, and 60 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang *et al.* (U.S. Patent No. 6,069,066) in combination with Lin *et al.* (U.S. Patent No. 6,551,916). Claims 14, 55, 56, 59, and 60 are canceled, so the rejections are moot.

#### **Claims 9, 10, 12, and 13**

Claims 9, 10, 12, and 13 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Huang *et al.* in combination with Yost *et al.* (U.S. Patent No. 5,444,018). Applicant does not admit that Huang *et al.* is prior art and reserves the right, as provided for under 37 C.F.R. 1.131 to "swear behind" Huang *et al.* Applicant respectfully traverses the rejections of claims 9, 10, 12, and 13.

The office action must provide specific, objective evidence of record for a finding of a teaching, suggestion or motivation to combine reference teachings and must explain the reasoning by which the evidence is deemed to support such a finding. *In re Sang Su*

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*Lee*, 277 F.3d 1338 (Fed. Cir. 2002). The office action, in an attempt to meet this requirement, in paragraph 15 states: "It would have been obvious to one of ordinary skill in the art to incorporate the contact structure of Huang with the logic interconnect structure of Yost in order to provide a contact structure as required by Yost (Abstract)." Applicant respectfully submits that Examiner's reliance on "obviousness" as the teaching motivation, or suggestion to combine the references does not meet the standard set out by *In re Sang Su Lee*. Applicant respectfully submits that Yost *et al.* includes a contact structure that includes titanium and tungsten. Yost *et al.* does not suggest that there are any deficiencies in this contact structure, so rather than providing a teaching, suggestion, or motivation to combine, Yost *et al.* provides a teaching that the contact structure described in Yost *et al.* is sufficient. Thus, the Office action fails to meet the standard established by *In re Sang Su Lee* for finding a teaching, suggestion, or motivation to combine the reference teachings. Thus, the Office action fails to state a *prima facie* case of obviousness with respect to claims 9, 10, 12, and 13. Therefore, applicant requests withdrawal of the rejections and reconsideration and allowance of claims 9, 10, 12, and 13.

Even assuming *arguendo* that Huang *et al.* and Yost *et al.* are not improperly combined, the Office action still fails to state a *prima facie* case of obviousness with respect to claims 9, 10, 12, and 13.

Claim 9 is dependent on claim 8. Claims 12 and 13 are dependent on claim 11. Claims 8, 10, and 11 recite, a trench having a depth greater than "a critical depth." In contrast, in the Abstract, Huang *et al.* recites, "An inter-metal dielectric layer with a trench is formed on the multi-metal layer." Hence Huang *et al.* fails to teach or suggest a "critical "depth" for the trench. Also, in contrast, in the Abstract, Yost *et al.* recites, "Depositing titanium by collimation places sufficient metal into high aspect ratio contacts to make good electrical connection." Hence Yost *et al.* fails to teach or suggest a "critical depth" for a trench. Thus, the Office action fails to state a *prima facie* case of obviousness with respect to claims 9, 10, 12, and 13. Therefore, applicant requests

AMENDMENT AND RESPONSE UNDER 37 CFR § 1.111

Serial Number: 09/388,567

Filing Date: September 2, 1999

Title: LOCAL MULTILAYERED METALLIZATION

Page 12

Dkt: 303.593US1

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withdrawal of the rejections and reconsideration and allowance of claims 9, 10, 12, and  
13.

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**CONCLUSION**

Applicant respectfully submits that the claims are in condition for allowance and notification to that effect is earnestly requested. The Examiner is invited to telephone applicant's attorney at 612-371-2109 to facilitate prosecution of the application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743

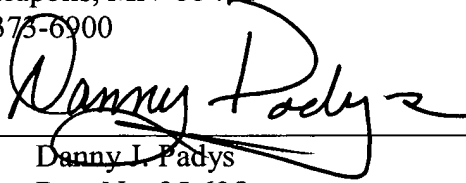
Respectfully submitted,

HOWARD E. RHODES

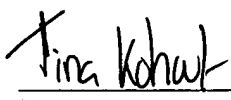
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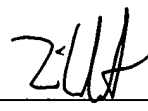
SCHWEGMAN, LUNDBERG,  
WOESSNER & KLUTH, P.A.  
P.O. Box 2938  
Minneapolis, MN 55402  
612-373-6900

Date November 24, 2004

By   
Danny I. Padys  
Reg. No. 35,635

CERTIFICATE UNDER 37 C.F.R. 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: Mail Stop Amendment, Commissioner for Patents, Washington, D.C. 20231, on this 24th day of November, 2004.

  
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